**INTRODUCTION**

*Review question / Objective:* Can periodontitis increase the risk of heart failure?

*Condition being studied:* Previous studies reported that periodontal disease is associated with higher risk of HF. However, their conclusions conflicted a little bit with each other. In this case, a systematic review may help drawing a more comprehensive conclusion. Therefore, the purpose of the present analysis is to tell if periodontitis is associated with HF as well as the subtypes of HF.

**METHODS**

*Search strategy:* (periodont*[Title/Abstract]) AND (heart failure[Title/Abstract]).
Participant or population: Periodontitis patients.

Intervention: Periodontitis.

Comparator: No Periodontitis.

Study designs to be included: Head to head meta-analysis.

Eligibility criteria: Observational studies which reported the association of periodontitis and heart failure.

Information sources: Pubmed, Embase, Cochrane Library, CNKI.

Main outcome(s): The risk of HF, HFrEF and HFpEF.

Quality assessment / Risk of bias analysis: Newcastle-Ottawa Scale.

Strategy of data synthesis: R studio software open-source edition will be used for calculating the pooled results of the included studies and plotting. R version 4.2.2 and meta package will be used.

Subgroup analysis: No.

Sensitivity analysis: No.

Language restriction: English and Chinese.

Country(ies) involved: China.

Keywords: Periodontitis, Heart Failure.

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